Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 112 are canceled.

113. (Amended) A method of treating a subject with a proliferative disorder, the method comprising administering a therapeutically effective dose of ~~the~~ a composition ~~of claim 91~~ comprising a therapeutically effective dose of a monomeric cytotoxic drug derivative/anti-CD22 antibody conjugate with reduced low conjugated fraction (LCF) below 10 percent prepared by:

(a) dissolving the monomeric cytotoxic drug derivative/anti-CD22 antibody conjugate to a final concentration of 0.5 to 2 mg/mL in a solution comprising a cryoprotectant at a concentration of 1.5%-5% by weight, a polymeric bulking agent at a concentration of 0.5-1.5% by weight, electrolytes at a concentration of 0.01M to 0.1 M, a solubility facilitating agent at a concentration of 0.005-0.05% by weight, buffering agent at a concentration of 5-50 mM such that the final pH of the solution is 7.8-8.2, and water;

(b) dispensing the above solution into vials at a temperature of +5 °C to +10 °C;

(c) freezing the solution at a freezing temperature of -35 °C to –50 °C;

(d) subjecting the frozen solution to an initial freeze drying step at a primary drying pressure of 20 to 80 microns at a shelf-temperature at –10 °C to –40 °C for 24 to 78 hours; and

(e) subjecting the freeze-dried product of step (d) to a secondary drying step at a drying pressure of 20 to 80 microns at a shelf temperature of +10°C to + 35°C for 15 to 30 hours.

114. (Amended) The method of treatment of claim 113, wherein the therapeutically effective dose of the composition is administered subcutaneously, intraperitoneally, intravenously, intraarterially, intramedullarly, intrathecally, transdermally, transcutaneously, intranasally, topically, ~~entereally~~enterally, intravaginally, sublingually or rectally.

115. (Original) The method of treatment of claim 113, wherein the therapeutically effective dose of the composition of the invention is administered intravenously.

116. (Original) The method of claim 113, wherein the subject is a human subject and the proliferative disorder is cancer.

117. (Original) The method of claim 116, wherein the cancer is a B-cell malignancy.

118. (Original) The method of claim 117, wherein the B-cell malignancy is leukemia.

119. (Original) The method of claim 118, wherein the leukemia expresses cell surface antigen CD22.

120. (Original) The method of claim 117, wherein the B-cell malignancy is lymphoma.

121. (Original) The method of claim 120, wherein the lymphoma expresses cell surface antigen CD22.

122. (Original) The method of claim 116, wherein the cancer is a carcinoma.

123. (Original) The method of claim 116, wherein the cancer is a sarcoma.

124. (Amended) A method of treating a B-cell malignancy, the method comprising administering to a patient in need of said treatment a therapeutically effective composition comprising a cytotoxic drug-anti-CD22-antibody conjugate, wherein the cytotoxic drug in the cytotoxic drug-anti-CD22-antibody conjugate is selected from the group consisting of calicheamicins, thiotepa, taxanes, vincristine, daunorubicin, doxorubicin, epirubicin, actinomycin, authramycin, azaserines, bleomycins, tamoxifen, idarubicin, dolastatins/auristatins, hemiasterlins, maytansinoids, and esperamicins.

125. (Original) The method of claim 124, wherein the B-cell malignancy is a lymphoma.

126. (Original) The method of claim 125, wherein the B-cell malignancy is a Non-Hodgkin's lymphoma.

127. (Original) The method of claim 124, comprising administering the therapeutically effective composition of the cytotoxic drug-anti-CD22-antibody conjugate with one or more bioactive agents.

Claim 128 is canceled.

129. (Original) The method of claim 124, wherein the cytotoxic drug is calicheamicin.

130. (Original) The method of claim 126, wherein the calicheamicin is gamma calicheamicin or N-acetyl calicheamicin.

131. (Amended) The method of claim 127, wherein the one or more bioactive agents are ~~selected from a group consisting of~~ antibodies~~, growth factors, hormones, cytokines, anti-hormones, xanthines, interleukins, interferons, and cytotoxic drugs~~.

132. (Original) The method of claim 131, wherein the bioactive agent is an antibody.

133. (Original) The method of claim 132, wherein the antibody is directed against a cell surface antigen expressed on B-cell malignancies.

134. (Original The method of claim 133, wherein the antibody directed against cell surface antigens expressed on B-cell malignancies is selected from a group consisting of anti-CD19, anti-CD20 and anti-CD33 antibodies.

135. (Original) The method of claim 134, wherein the anti-CD20 antibody is rituximab.

Claims 136 to 141 are canceled.

142. (Original) The method of claim 131, wherein the therapeutically effective composition of the cytotoxic drug-anti-CD22-antibody conjugate is administered together with an antibody directed against a cell surface antigen on B-cell malignancies, and optionally comprising one or more combinations of cytotoxic agents as a part of a treatment regimen, wherein the combination of cytotoxic agents is selected from:

A. CHOPP (cyclophosphamide, doxorubicin, vincristine, prednisone, and procarbazine);

B. CHOP (cyclophosphamide, doxorubicin, vincristine, and prednisone);
C. COP (cyclophosphamide, vincristine, and prednisone);
D. CAP-BOP (cyclophosphamide, doxorubicin, procarbazine, bleomycin, vincristine, and prednisone);
E. m-BACOD (methotrexate, bleomycin, doxorubicin, cyclophosphamide, vincristine, dexamethasone, and leucovorin);
F. ProMACE-MOPP (prednisone, methotrexate, doxorubicin, cyclophosphamide, etoposide, leucovorin, mechloethamine, vincristine, prednisone, and procarbazine);
G. ProMACE-CytaBOM (prednisone, methotrexate, doxorubicin, cyclophosphamide, etoposide, leucovorin, cytarabine, bleomycin, and vincristine);
H. MACOP-B (methotrexate, doxorubicin, cyclophosphamide, vincristine, fixed dose prednisone, bleomycin, and leucovorin);
I. MOPP (mechloethamine, vincristine, prednisone, and procarbazine);
J. ABVD (adriamycin/doxorubicin, bleomycin, vinblastine, and dacarbazine);
K. MOPP (mechloethamine, vincristine, prednisone, and procarbazine) alternating with ABV (adriamycin/doxorubicin, bleomycin, and vinblastine);
L. MOPP(mechloethamine, vincristine, prednisone, and procarbazine) alternating with ABVD (adriamycin/doxorubicin, bleomycin, vinblastine, and dacarbazine);
M. ChlVPP (chlorambucil, vinblastine, procarbazine, and prednisone);
N. IMVP-16 (ifosfamide, methotrexate, and etoposide);
O. MIME (methyl-gag, ifosfamide, methotrexate, and etoposide);
P. DHAP (dexamethasone, high-dose cytarabine and cisplatin);
Q. ESHAP (etoposide, methylpredisolone, high-dose cytarabine, and cisplatin);
R. CEPP(B) (cyclophosphamide, etoposide, procarbazine, prednisone, and bleomycin);
S. CAMP (lomustine, mitoxantrone, cytarabine, and prednisone);
T. CVP-1 (cyclophosphamide, vincristine, and prednisone). ESHOP (etoposide, methylpredisolone, high-dose cytarabine, vincristine and cisplatin);
U. ESHOP (etoposide, methylpredisolone, high-dose cytarabine, vincristine and cisplatin);
V. EPOCH (etoposide, vincristine, and doxorubicin for 96 hours with bolus doses of cyclophosphamide and oral prednisone);
W. ICE (ifosfamide, cyclophosphamide, and etoposide);
X. CEPP(B) (cyclophosphamide, etoposide, procarbazine, prednisone, and bleomycin);
Y. CHOP-B. (cyclophosphamide, doxorubicin, vincristine, prednisone, and bleomycin); and
Z. P/DOCE (epirubicin or doxorubicin, vincristine, cyclophosphamide, and prednisone).

143. (Original) A method of treating aggressive lymphomas comprising administering to a patient in need of said treatment a therapeutically effective composition of a monomeric calicheamicin derivative-anti-CD22-antibody conjugate together with one or more bioactive agents.

144. (Amended) The method of claim 143, wherein the monomeric calicheamicin derivative-anti-CD22 antibody conjugate is G5/44-NAc-gamma-calicheamicin DMH AcBut conjugate.

145. (New) The method of claim 143, wherein the monomeric calicheamicin derivative-anti-CD22 antibody conjugate comprises a calicheamicin derivative functionalized with 3-mercapto-3-methyl butanoyl hydrazide and an anti-CD22 antibody comprising SEQ ID NO:1 for CDR-H1, SEQ ID NO: 2 or SEQ ID NO:13 or SEQ ID NO:15 or SEQ ID NO:16 or residues 50-65 of SEQ ID NO:27 for CDR-H2, SEQ ID NO:3 for CDR-H3, SEQ ID NO:4 for CDR-L1, SEQ ID NO:5 for CDR-L2, and SEQ ID NO:6 for CDR-L3.

146. (New) The method of claim 113, wherein the anti-CD22 antibody of the monomeric cytotoxic drug derivative/anti-CD22 antibody conjugate comprises a CDR-grafted antibody comprising a light chain variable region having a sequence set forth in SEQ ID NO: 19 and a heavy chain variable region having a sequence set forth in SEQ ID NO: 27.

147. (New) The method of claim 113, wherein the anti-CD22 antibody of the monomeric cytotoxic drug derivative/anti-CD22 antibody conjugate comprises SEQ ID NO:1 for CDR-H1, SEQ ID NO: 2 or SEQ ID NO:13 or SEQ ID NO:15 or SEQ ID NO:16 or residues 50-65 of SEQ ID NO:27 for CDR-H2, SEQ ID NO:3 for CDR-H3, SEQ ID NO:4 for CDR-L1, SEQ ID NO:5 for CDR-L2, and SEQ ID NO:6 for CDR-L3.

148. (New) The method of claim 124, wherein the anti-CD22 antibody of the cytotoxic drug-anti-CD22-antibody conjugate comprises a CDR-grafted antibody comprising a light chain variable region having a sequence set forth in SEQ ID NO: 19 and a heavy chain variable region having a sequence set forth in SEQ ID NO: 27.

149. (New) The method of claim 124, wherein the anti-CD22 antibody of the cytotoxic drug-anti-CD22 antibody conjugate comprises SEQ ID NO:1 for CDR-H1, SEQ ID NO: 2 or SEQ ID

NO:13 or SEQ ID NO:15 or SEQ ID NO:16 or residues 50-65 of SEQ ID NO:27 for CDR-H2, SEQ ID NO:3 for CDR-H3, SEQ ID NO:4 for CDR-L1, SEQ ID NO:5 for CDR-L2, and SEQ ID NO:6 for CDR-L3.